MOFFAT®

E27 CONVECTION OVEN

E27MS CONVECTION OVEN

SERVICE MANUAL

turbofan

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Revision 3/F3563

⚠ <u>WARNING:</u> ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

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This manual is designed to take a more in depth look at the E27 convection oven for the purpose of making the unit more understandable to service people.

There are settings explained in this manual that should never require to be adjusted, but for completeness and those special cases where these settings are required to change, this manual gives a full explanation as to how, and what effects will result.

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IMPORTANT: MAKING ALTERATIONS MAY VOID WARRANTIES AND APPROVALS.

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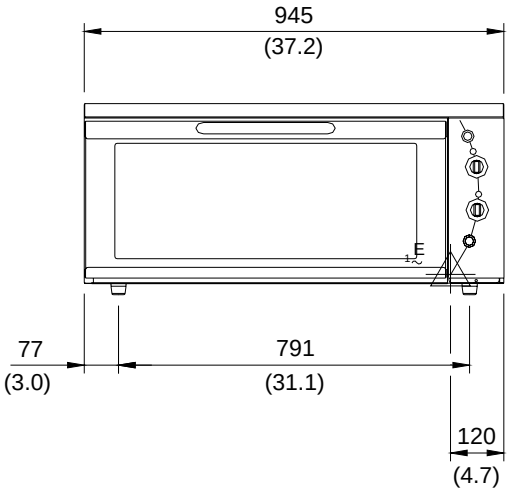
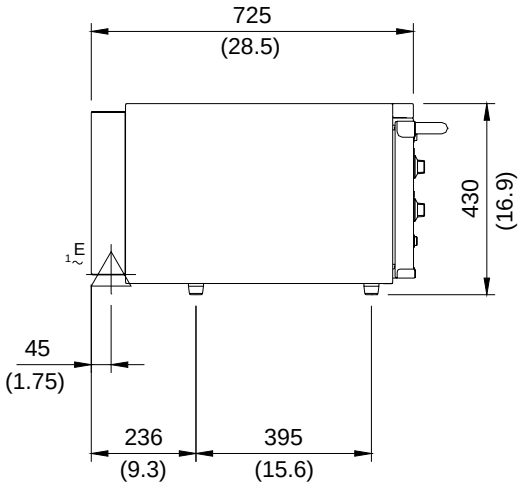
1. SPECIFICATIONS

MODEL: E27



FRONT



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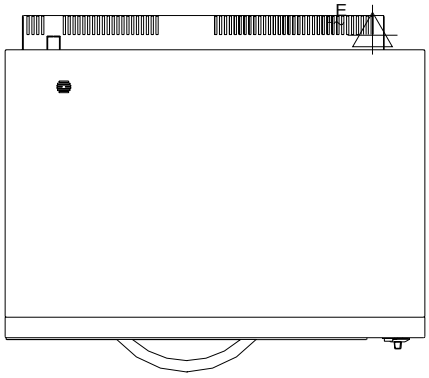


PLAN

LEGEND

- Electrical connection entry point

Dimensions shown in millimetres.
Dimensions in inches shown in brackets.

LOCATION

To ensure correct ventilation for the motor and controls the following minimum installation clearances are to be adhered to:

Top	200mm / 8”
Rear	25mm / 1”
Left-hand side	25mm / 1”
Right-hand side	25mm / 1”

OVEN INTERNAL DIMENSIONS

Width	695 mm / 27 $^{3}/_{8}$”
Height	285 mm / 11 $^{1}/_{4}$”
Depth	505 mm / 19 $^{7}/_{8}$”
Oven Volume	0.10 m³ / 3.5 ft³

OVEN RACK SIZE

Width	660 mm / 26”
Depth:	460 mm / 18”

ELECTRICAL SUPPLY SPECIFICATION OPTIONS

208-220V ac, 50/60Hz, 14.4A, 3.0kW @ 208V
230-240V ac, 50/60Hz, 12.5A, 3.0kW @ 240V

ELECTRICAL PLUG SPECIFICATION REQUIREMENTS

Australia	3-pin 250V 15A, AS/NZ 3112
Canada	3-pin 250V 15A, NEMA 6-15
New Zealand	3-pin 250V 15A, AS/NZ 3112
United Kingdom	3-pin 250V 13A fused, BS 1363A
United States	3-pin 250V 15A, NEMA 6-15
Other Countries	3-pin 250V 13A minimum, type to meet country standards

2. INSTALLATION

⚠ **WARNING: THIS APPLIANCE MUST BE GROUNDED.**

⚠ **WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.**

It is most important that the oven is installed correctly and that the operation is correct before use. Installation shall comply with local electrical, health and safety requirements.

BEFORE CONNECTION TO POWER SUPPLY

Unpack and check unit for damage and report any damage to the carrier and dealer. Report any deficiencies to your dealer. Check that the available power supply is correct to that shown on the rating plate located on the right-hand side panel.

208-220V ac, 50/60Hz, 14.4A, 3.0kW @ 208V
230-240V ac, 50/60Hz, 12.5A, 3.0kW @ 240V

LOCATION

To ensure correct ventilation for the motor, and controls the following minimum installation clearances are to be adhered to:

Top	200mm / 8”
Rear	25mm / 1”
Left-hand side	25mm / 1”
Right-hand side	25mm / 1”

IMPORTANT: THE OVEN VENT LOCATED ON THE CABINET TOP MUST NEVER BE OBSTRUCTED.

Position the oven in its allocated working position. Use a spirit level to ensure the oven is level from side to side and front to back. (If this is not carried out, uneven cooking could occur). The feet used with bench mounting or provided with stands are adjustable and will require adjusting in levelling the unit. It should be positioned so the operating panel and oven shelves are easily reachable for loading and unloading.

BEFORE USE

Operate the oven for about 1 hour at 200°C (400°F) to remove any fumes or odours which may be present.

ELECTRICAL CONNECTION

E27 convection ovens are supplied with pre-fitted cords. Ensure unit is fitted with the correct cord and plug for the installation. Refer specifications section.
Should changing of the cord be necessary, gain access to the electrical connection terminal block, grounding lug, and strain relief by removing the back panel (four screws).

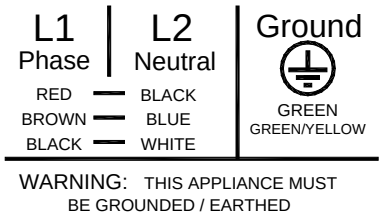


Figure 2.1

RATING PLATE LOCATION

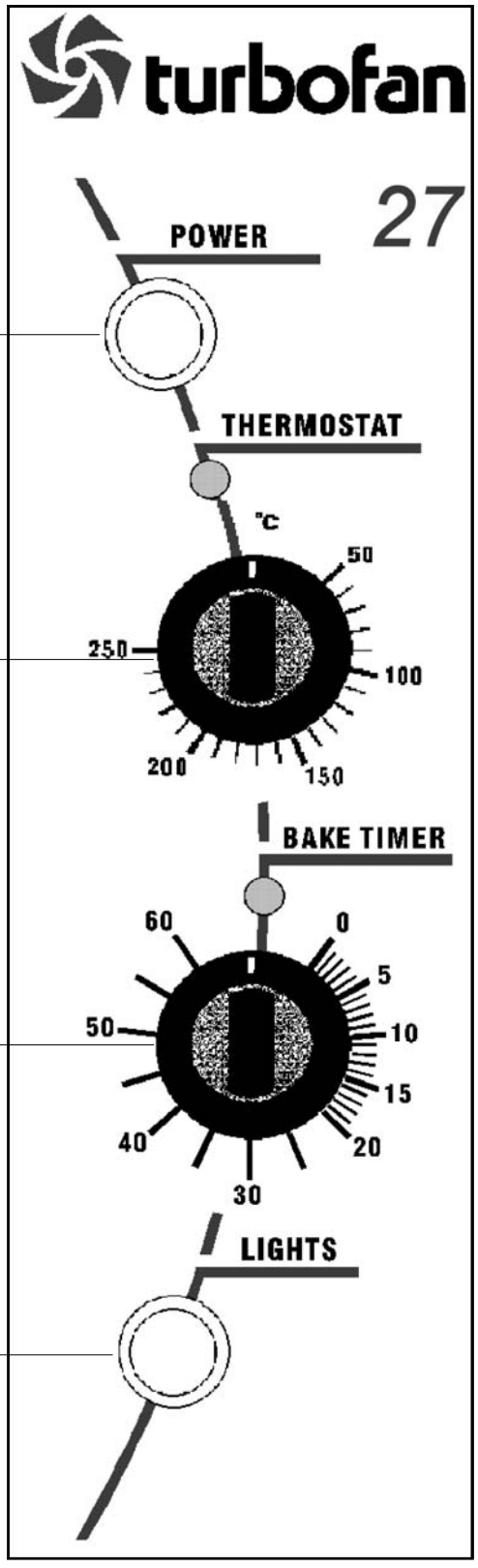
The rating plate for the E27 convection oven is located at the bottom left corner of the RH side panel.

Figure 2.2

3. OPERATION

NOTE: A full user's operation manual is supplied with the product and can be used for further referencing of installation, operation and service.

3.1 DESCRIPTION OF CONTROLS



1. POWER
Depress to switch power on or off (switch illuminates when power is on).

2. THERMOSTAT
Temperature range 50 - 250°C (120 - 480°F).
Indicator illuminates when elements are cycling ON to maintain set temperature.

3. BAKE TIMER
1 Hour bake timer.
(Indicator illuminates when "time up" (0) reached, and buzzer sounds).

4. LIGHT SWITCH
Push switch to activate light.
(Oven light illuminates while button depressed).

3.2 EXPLANATION OF CONTROL SYSTEM

The E27 Turbofan convection ovens feature multi-function operator controls for which a correct understanding of their operation is required before carrying out any service or fault repair work. The control device functions are explained as follows:

A power switch on the control panel isolates power to all the controls of the oven. With the power switch Off all functions of the oven are inoperable.

NOTE: The supply voltage is fed to the input side of the heating element power relay whenever the electrical supply is on.

With the power switch On (illuminated) power is directly supplied to the 60 minute bake timer, door microswitch, and the light switch. The light switch will turn the oven light on when the door is closed, but only whilst the light switch is held in.

The door microswitch on the E27 oven controls the light, the circulation fan, and the fan element. Hence, opening the door on the E27 oven causes the circulation fan and fan element to switch off, as well as causing the oven light to come on.

The 60 minute timer is a mechanical timer and can therefore be operated with the oven's power switch On or Off. However, only with the oven's power switch On will the switch contacts of the 60 minute timer turn on the time-up buzzer and illuminate the time-up indicator on the control panel. The buzzer and time-up indicator provide indication that the time setting has run down to zero and at this point will remain On continuously until the 60 minute timer has been manually set back to the Off (vertical) position. The 60 minute timer does not control any other part of the oven's operating system as this timer is independent of the temperature control and heating system.

The temperature control of these ovens is with a capillary type thermostat which can be set to a required cooking temperature.

The E27 has an element coiled around the circulation fan in the rear of the oven. Power to the element is provided via a heating power relay located at the rear of the oven. When the thermostat calls for heat, it energises this relay, which switches power to the fan element. The control panel indicator light above the thermostat knob cycles on and off with the thermostat to indicate when the element is on and the oven is heating. In the 'Off' position, the element relies on the thermostatic control to prevent it switching on. Accordingly, if the oven temperature drops below approximately 20°C the thermostat and element may cycle on at this setting.

The circulation fan on the E27 oven reverses direction every 90 seconds for a 50Hz supply (every 75 seconds for 60Hz). Prior to a change of direction the fan motor is switched off for 10 seconds (8½ seconds for 60Hz) to allow the motor/fan to slow down. Cycling of the fan motor is controlled by a continuous cam timer with electric motor. The timer has two cams and switches which supply power alternately to one of two motor supply wires, causing the motor to alternate direction. During the fan motor slow down periods, both cam switches are open and power is not supplied to either of the motor supply wires. When the oven door is opened or the power is switched off the cams will stop. When the oven door is closed or the power switched back on the cam timer will resume its cycle from the point where it stopped.

The fan motor is a split phase continuous capacitor motor with the capacitor externally connected across the motor supply leads. The motor also incorporates an internal thermal trip switch for overheat protection which is auto resetting.

The following Troubleshooting Guide (section 5) should be used to identify any incorrect oven operation. On correct identification of the operating fault the Troubleshooting Guide will make reference to the corrective action required, or refer to the Fault Diagnosis section and/or Service section to assist in correction of the fault.

4. MAINTENANCE

⚠ **WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.**

4.1 CLEANING

⚠ **WARNING: ALWAYS TURN THE POWER SUPPLY OFF BEFORE CLEANING.**

IMPORTANT: THIS UNIT IS NOT WATER PROOF.
DO NOT USE A WATER JET SPRAY TO CLEAN INTERIOR OR EXTERIOR OF THIS UNIT.

EXTERIOR

Clean with a good quality stainless steel cleaning compound. Harsh abrasive cleaners may damage the surface.

INTERIOR

Ensure that the oven chamber is cool. Do not use wire brushes, steel wool or other abrasive materials. Clean the oven regularly with a good quality oven cleaner. Take care not to damage the fan or the tube at the right side of the oven which controls the thermostat.

OVEN RACKS

To remove, slide out to the stop position, raise the front edge up, and lift out.

SIDE RACKS

Undo the thumbscrew (anti-clockwise rotation) securing rack to oven wall, swing rack towards centre of oven to disengage location pin at front of side, and pull rack forward to remove. To replace, engage rack in rear holes, swing towards side of oven to engage in front hole, and replace thumbscrew.

FAN BAFFLE

To remove, loosen thumbscrews (anti-clockwise rotation) at top of baffle. Lift baffle to disengage from locating studs and thumb-screws then pull forward to remove. Replace in reverse order.

OVEN SEALS

To remove, hold at their centre point and pull forward until they unclip. Remove side seals first, then top and bottom. The seals may be washed in the sink, but take care not to cut or damage them. To replace the top seal, ensure that the lip is facing the oven opening. The left, right and bottom seals have the lip facing out. Fit the top and bottom seals first, then the side seals.

OVEN DOOR GLASS

Clean with conventional glass cleaners

4.2 ROUTINE PROCEDURES

DOOR SEALS

Check for deterioration 12 months

ELEMENTS

Check that element resistances are correct to their ratings (refer 6.3.9) 12 months

5. TROUBLE SHOOTING

⚠ **WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.**

FAULT	POSSIBLE CAUSE	REMEDY
THE OVEN DOES NOT OPERATE / START	The mains isolating switch on the wall, circuit breaker or fuses are "off" at the power board.	Turn on.
	The power switch on the oven is off.	Depress switch. Switch will illuminate.
	Incorrect electrical supply. **(Refer fault diagnosis 6.1.1)**	Ensure electrical supply correct.
	Power switch on unit faulty. **(Refer fault diagnosis 6.1.1)**	Replace. **(Refer service section 6.3.4)**
FAN DOESN'T OPERATE	Door not closed.	Close door.
	Fan obstructed.	Clear obstruction.
	Door microswitch is out of adjustment. **(Refer fault diagnosis 6.1.2)**	Adjust. **(Refer service section 6.4.2)**
	Door microswitch faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.2)**
	Fan motor faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.11)**
	Motor timer faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.12)**
	Motor capacitor faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.13)**
	Wiring.	Check and tighten any loose wiring.
FAN ONLY OPERATES IN ONE DIRECTION	Motor timer faulty. **(Refer fault diagnosis 6.1.2)**	Replace. **(Refer service section 6.3.13)**
OVEN LIGHT NOT ILLUMINATING - DOOR OPEN	Blown bulb.	Replace. **(Refer service section 6.3.1)**
	No power to light. **(Refer fault diagnosis 6.1.3)**	Correct fault.
OVEN LIGHT NOT ILLUMINATING - DOOR CLOSED	Blown bulb.	Replace. **(Refer service section 6.3.1)**
	Light switch faulty. **(Refer fault diagnosis 6.1.4)**	Replace. **(Refer service section 6.3.4)**

FAULT	POSSIBLE CAUSE	REMEDY
60 MINUTE TIMER WILL NOT TIME DOWN	Timer faulty.	Replace. **(Refer service section 6.3.6)**
60 MINUTE TIMER INACCURATE BELOW 20 MINUTES	Timer not set correctly.	For timer settings below 20 minutes, always rotate past 20 minutes, then back to desired time.
	Zero (time up) position not set correctly.	**(Refer service section 6.4.3)**
60 MINUTE TIMER NO TIME UP BUZZER	Buzzer faulty. **(Refer fault diagnosis 6.1.5)**	Replace. **(Refer service section 6.3.5)**
	Timer not switching on buzzer. **(Refer fault diagnosis 6.1.5)**	Replace timer. **(Refer service section 6.3.6)**
60 MINUTE TIMER NO TIME UP INDICATOR	Indicator faulty. **(Refer fault diagnosis 6.1.6)**	Replace. **(Refer service section 6.3.3)**
NO HEAT - FAN ELEMENT NOT WORKING	No power to thermostat. **(Refer fault diagnosis 6.1.7)**	Identify fault and correct.
	Thermostat faulty. **(Refer fault diagnosis 6.1.7)**	Replace. **(Refer service section 6.3.7)**
	Fan element not working. **(Refer fault diagnosis 6.1.7)**	Replace. **(Refer service section 6.3.9)**
	Heating power relay faulty. **(Refer fault diagnosis 6.1.7)**	Replace. **(Refer service section 6.3.8)**
NO TEMPERATURE CONTROL	Thermostat faulty. **(Refer fault diagnosis 6.1.8)**	Replace. **(Refer service section 6.3.7)**
	Heating relay faulty. **(Refer fault diagnosis 6.1.8)**	Replace. **(Refer service section 6.3.8)**
SLOW RECOVERY	Overloading of oven.	Reduce oven loading.
	Electrical supply incorrect.	Check supply voltage is as per rating plate voltage.
	Fan not working.	Check fan operation.
	Thermostat calibration. **(Refer fault diagnosis 6.1.9)**	Correct calibration. **(Refer service section 6.4.1)**
NO THERMOSTAT HEATING INDICATOR LIGHT	Indicator faulty. **(Refer fault diagnosis 6.1.10)**	Replace. **(Refer service section 6.3.3)**

FAULT	POSSIBLE CAUSE	REMEDY
DOOR DOES NOT CLOSE	Tray in way of door.	Correctly position tray in rack.
	Door seal obstruction.	Correctly install door seal. **(Refer service section 6.3.16)**
	Door hinges worn.	Replace. **(Refer service section 6.3.18)**
	Door hinge counter brackets worn.	Replace. **(Refer service section 6.3.19)**
DOOR SEAL LEAKS	Door seal damaged.	Replace. **(Refer service section 6.3.16)**
	Door seal incorrectly fitted.	Correctly install door seal. **(Refer service section 6.3.16)**

6. SERVICE PROCEDURES

WARNING: ENSURE POWER SUPPLY IS SWITCHED OFF BEFORE SERVICING.

WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

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6.1 FAULT DIAGNOSIS

6.1.1 OVEN DOES NOT OPERATE / START

Incorrect electrical supply

Check that the voltage across phase and neutral (L1 and L2) terminals of terminal block is the voltage as stated on the unit's electrical rating plate.

If incorrect, check electrical connection of supply wiring and / or check electrical supply.

Power switch faulty

Check if power switch latches. If the switch does not latch, then switch is faulty—replace.

With switch latched, check voltage across terminal one to terminal three or four. If there is no voltage, check for fault in wiring.

Check voltage across terminal two to terminal three or four. If there is no voltage, then switch is faulty—replace.

NOTE: When power switch is latched, it should illuminate if operating correctly.

6.1.2 FAN DOESN'T OPERATE

Microswitch out of adjustment

Open oven door and manually depress door microswitch actuator at top right of oven. If this activates the fan, then the microswitch actuator arm inside control cavity requires adjustment.

Microswitch faulty

Check voltage from microswitch terminals to neutral.

With the door closed there should be power to the com terminal and the n.o. terminal.

With the door open there should be power to the com terminal and the n.c. terminal.

If not, microswitch is faulty—replace.

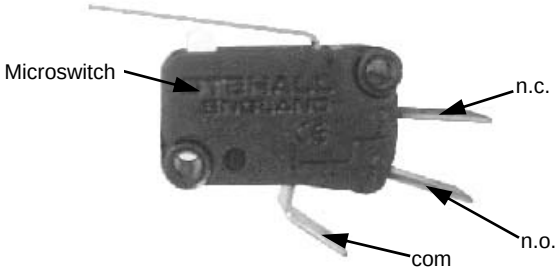

Figure 6.1.1

Fan motor timer faulty

With oven switched on, and door closed, ensure that the cams on the motor timer are rotating.

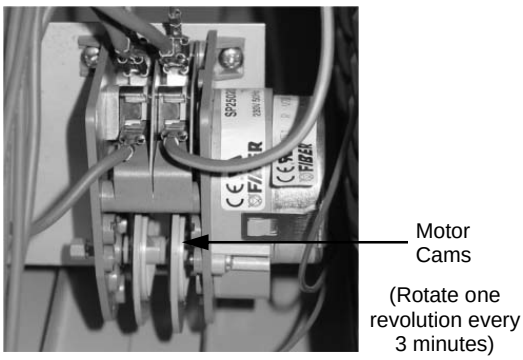

Figure 6.1.2

If cams are rotating, then isolate the power supply from the oven. Remove the bottom wire from the left hand switch terminals. Rotate the cams manually whilst testing for continuity through the left hand switch. Check that the continuity cycles as the cams are rotated. Re-secure the left hand wire, and then repeat test for right hand switch.

When operating, 50Hz models should cycle the power for approximately 80 seconds through each switch, with a 10 second delay between each cycle.

On 60Hz models the power should cycle for approximately 65 seconds through each switch, with an 8 second delay between each cycle.

If there is no continuity, or the continuity does not cycle correctly then timer is faulty - replace.

Fan motor capacitor faulty

Ensure that oven is isolated from the power supply. Disconnect all wires from the motor terminal block, except for the two capacitor wires. Briefly short across the capacitor terminals, to ensure that it is fully discharged.

Using a multimeter, measure the resistance across capacitor terminals.

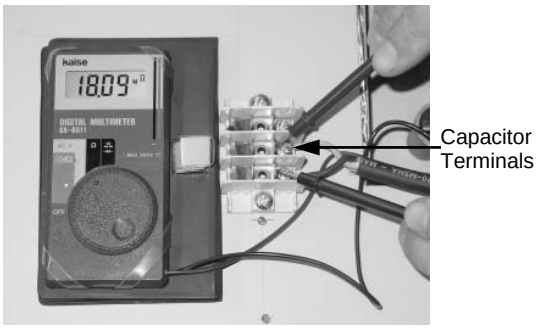

Figure 6.1.3

The resistance should start low and quickly increase to infinity within 5-10 seconds. If the resistance does not increase at all, then the capacitor is shorted - replace. If the capacitor is infinite resistance straight away then it is open-circuit - replace. If the resistance never goes very high then the capacitor is leaky - replace.

Fan motor faulty

At rear of oven, check that there is supply voltage from neutral to both of the phase terminals on the motor terminal block.

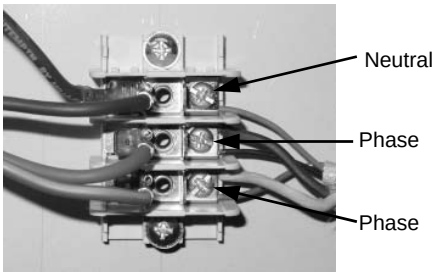

Figure 6.1.4

If the voltage to the motor terminal block is correct, and the capacitor is not faulty, then check the oven fan for free rotation. Remove any obstruction.

If fan is free to spin and the voltage supply is correct, then the motor is faulty—replace.

6.1.3 OVEN LIGHT NOT ILLUMINATING—DOOR OPEN

No power to light

Check the supply voltage across lamp housing terminals at rear of oven. If the voltage is correct, replace the bulb (if faulty). If the bulb is OK, check lamp housing. Replace if faulty.

If there is no voltage, check voltage across micro-switch terminals to neutral.

With the door closed there should be power to the com terminal and the n.o. terminal.

With the door open there should be power to the com terminal and the n.c. terminal.

If not, microswitch is faulty—replace.

6.1.4 OVEN LIGHT NOT ILLUMINATING—DOOR CLOSED

Light switch faulty

Check voltage to the top terminal of the switch. If there is no voltage, then check wiring.

With switch depressed, check voltage at bottom terminal. If there is no voltage, then replace the switch.

If voltage is correct, then check wiring to light.

NOTE: Alternately, perform a continuity test across the terminals with the light switch depressed.

6.1.5 60 MINUTE TIMER NO TIME UP BUZZER

Buzzer faulty

With timer in 'zero' position, check the buzzer at bottom of control panel (inside) for voltage across terminals. If voltage is correct then buzzer is faulty—replace.

If there is no voltage, then check wiring.

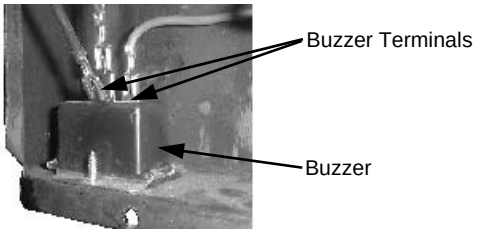

Figure 6.1.5

Timer not switching on buzzer

With timer in zero position, check voltage to terminal 1 and terminal 2 of timer. If there is no voltage at terminal 1 then check wiring.

If no voltage at terminal 2 then timer is faulty—replace.

NOTE: Buzzer and time up indicator will continue until the timer manually switched off (to vertical position).

6.1.6 60 MINUTE TIMER NO TIME UP INDICATOR

Indicator faulty

With the timer in the zero position, check for voltage across the indicator light. If correct, then the indicator light is faulty—replace.

If there is no voltage then check wiring.

6.1.7 NO HEAT

No power to thermostat

With door closed, check voltage to terminal P of the oven thermostat. If there is no voltage then check voltage to terminal NO of door microswitch. If there is no voltage then refer 6.1.2, microswitch out of adjustment / faulty. If there is voltage then check wiring to the thermostat.

Thermostat faulty

Set thermostat to 200°C or 400°F. Check the voltage out of terminal 1 on the thermostat. If there is no voltage (and there is voltage at terminal P) then the thermostat is faulty—replace.

If the voltage is correct and the heating light is on then check all wiring to elements.

Fan element faulty (blown)

With the thermostat on and heating check voltage across fan element terminals at rear of oven. If the voltage is correct then check the current draw of element. If there is no current draw then element is faulty—replace.

NOTE: Correct fan element current draw:
E27 208-220 V: 13.4A ± 1.5A
E27 230-240 V: 12.1A ± 1.5A

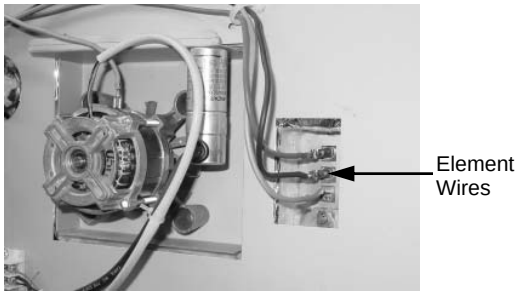

Figure 6.3.10

Heating power relay faulty

Set thermostat to 200°C or 400°F. With door closed, check voltage from terminal B to terminal A of heating relay. If no voltage check wiring. Check voltage to terminal 6. If voltage at terminal 6 but no voltage at terminal 4 then the relay is faulty - replace.

6.1.8 NO TEMPERATURE CONTROL

Thermostat faulty

With thermostat in 'off' position (knob vertical), slowly turn thermostat up until heating indicator just comes on. Wait for heating indicator to cycle off. If indicator has not cycled off after 10 minutes then thermostat is faulty—replace.

NOTE: E27 thermostat may cycle on and off with the knob set to the 'off' position if the oven temperature is below 20°C.

Heating relay faulty

With power switch off on control panel, check for voltage at terminal 4 of heating relay. If there is voltage then the heating relay is faulty—replace.

6.1.9 SLOW RECOVERY

Thermostat out of calibration

Place an accurate digital thermometer probe in centre of oven. Set thermostat to 180°C or 355°F. Close the oven door and allow oven thermostat to cycle on and off twice. Record oven centre temperature for the next thermostat on and off cycle. The thermostat should cycle on and off between 165°C and 195°C or 330°F and 385°F when set to the above temperature. If oven temperature is outside these ranges, then the thermostat requires recalibration.

NOTE: Thermostat cycling span should be ±15°C or 27°F

6.1.10 NO THERMOSTAT HEATING INDICATOR

Indicator faulty

With the thermostat on and heating, check the voltage across the indicator terminals. If the voltage is correct then the indicator is faulty—replace.

If there is no voltage then check wiring.

6.2 ACCESS

6.2.1 CONTROL PANEL

1) Undo one screw at bottom of control panel.

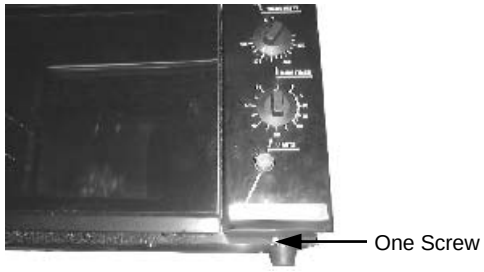

Figure 6.2.1

2) Pull out bottom of control panel and drop down to disengage tabs at top of control panel.

6.2.2 SERVICE (REAR) PANEL

1) Undo the four screws holding the panel.

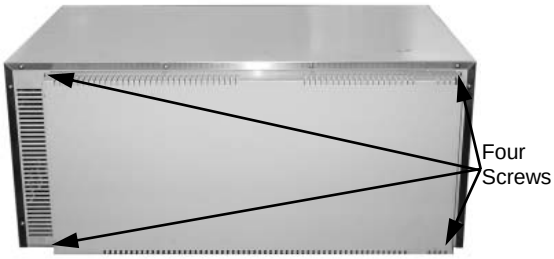

Figure 6.2.2

2) Remove panel.

6.2.3 BAFFLE

1) Remove all trays and racks.
2) Loosen two thumb screws (top).

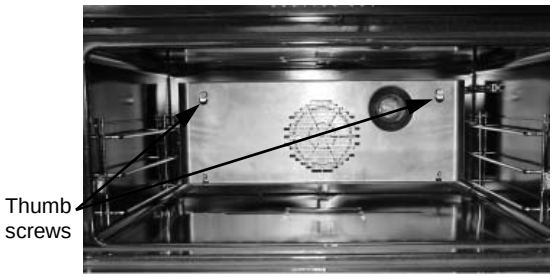

Figure 6.2.3

3) Lift baffle to disengage from locating studs and thumbscrews, and remove baffle.

6.2.4 E27 CONTROL PANEL—REAR

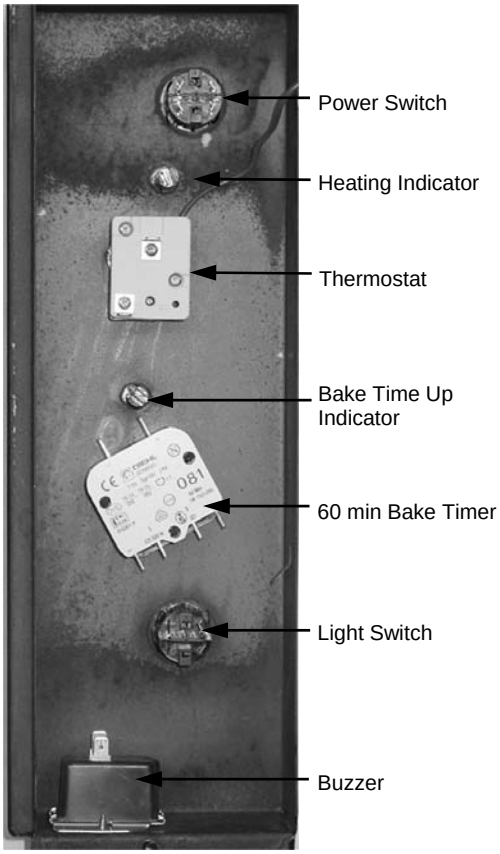

Figure 6.2.4

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6.3 REPLACEMENT

6.3.1 LIGHT BULB / GLASS

1) Remove baffle (refer 6.2.3).
2) Unscrew lamp cover.

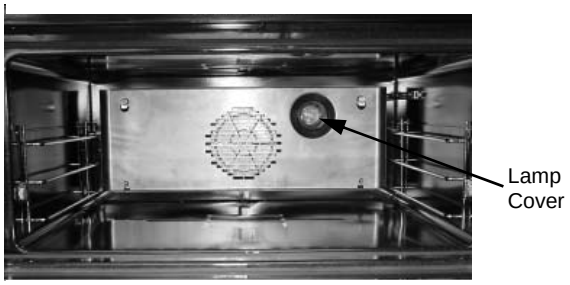

Figure 6.3.1

3) Unscrew bulb out of fitting.
4) Screw in replacement bulb.
5) Replace lamp cover and baffle.

6.3.2 DOOR MICROSWITCH

1) Open oven door.
2) Open control panel (refer 6.2.1).
3) Remove two screws holding microswitch and insulator to bracket.

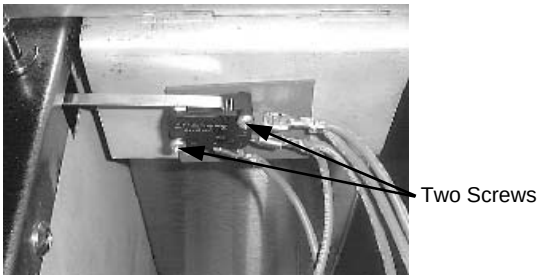

Figure 6.3.2

4) Transfer wires to new micro-switch and re-assemble.
5) Adjust microswitch (refer 6.4.2).

6.3.3 INDICATOR NEON LIGHT

1) With control panel open (refer 6.2.1) remove the wires from the back of the neon.

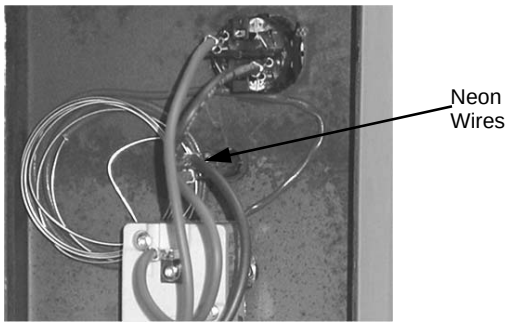

Figure 6.3.3

2) From back push neon through front of panel rotating clockwise.
3) Push new neon in from front of panel, and reconnect wires.

6.3.4 POWER / LIGHT SWITCHES

1) With control panel open (refer 6.2.1) remove the wires from the back of the switch, noting their positions.

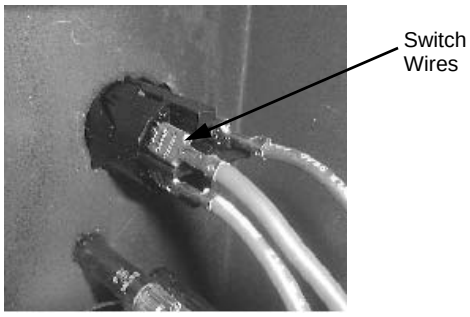

Figure 6.3.4

2) From back push switch through front of panel.
3) Push new switch in from front of panel, and reconnect wires.

6.3.5 BUZZER

1) Remove control panel (refer 6.2.1).
2) Remove two screws holding buzzer to panel.

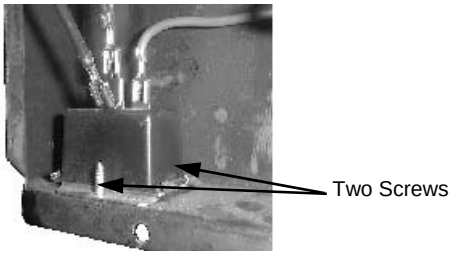

Figure 6.3.5

4) Transfer wires to new buzzer.
5) Reassemble in reverse order.

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6.3.6 BAKE TIMER

1) Remove bake timer knob by pulling it firmly away from control panel.
2) Open control panel (refer 6.2.1) and undo two screws securing timer.

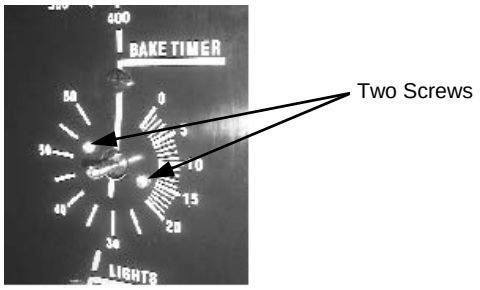

Figure 6.3.6

3) Transfer wires to new timer.
4) Withdraw old timer and insert new timer, securing with screws.
5) Replace knob.

6.3.7 THERMOSTAT

1) Pull knob off front of thermostat
2) Open control panel (refer 6.2.1) and undo two screws securing thermostat.

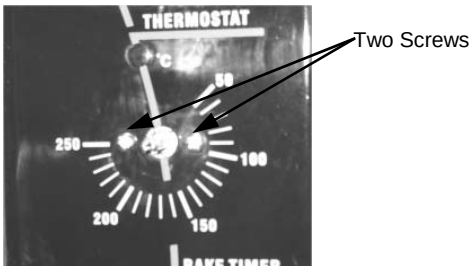

Figure 6.3.7

3) Transfer wires to new thermostat.
4) Remove service panel (refer 6.2.2) and from inside of oven loosen two screws holding thermostat phial bracket.

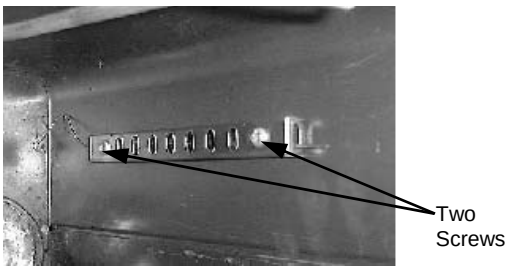

Figure 6.3.8

5) Withdraw old thermostat phial through rear of oven.
6) Insert new thermostat.
7) Re-assemble in reverse order.

6.3.8 RELAY

1) Remove service panel (refer 6.2.2).
2) Undo two screws securing relay to oven.

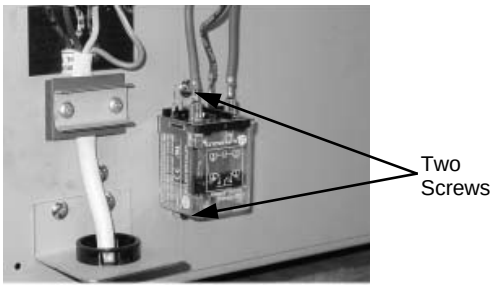

Figure 6.3.9

3) Transfer wires to new relay, and secure to oven with screws.

6.3.9 ELEMENT

1) With service panel and baffle removed (refer 6.2.2 and 6.2.3) remove the wires from the rear of the element.

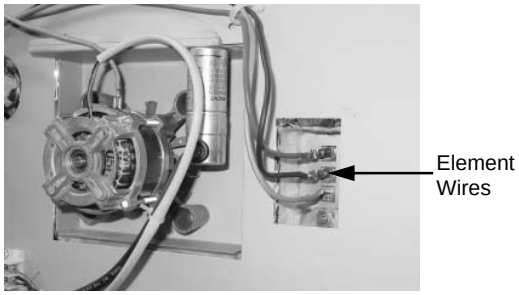

Figure 6.3.10

2) Unscrew the element from inside the oven.

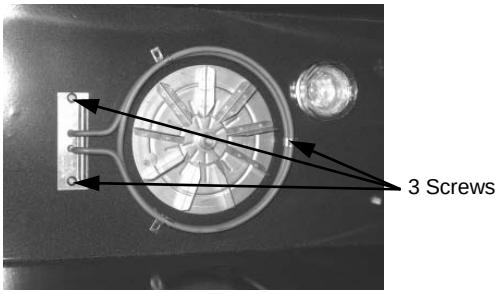

Figure 6.3.11

3) Pull element carefully to remove.
4) Replace and re-assemble in reverse order.

Element Ratings (±5%)

208-220V	Fan Element	15.5 ohms
230-240V	Fan Element	20.5 ohms

6.3.10 FAN

1) With baffle removed (refer 6.2.3) loosen the grub screw on the hub of the fan.

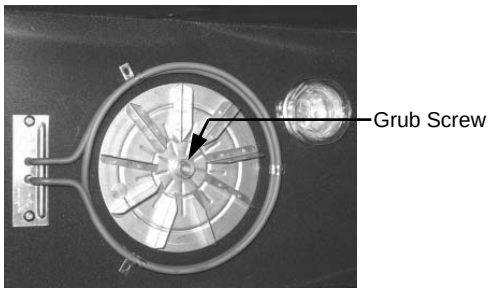

Figure 6.3.12

2) Withdraw the fan from the shaft.
3) Replace and re-assemble in reverse order.

NOTE: Ensure Teflon sealing washer is in position on fan shaft between fan and oven rear.

6.3.11 MOTOR

1) Remove fan (refer 6.3.10), and remove service panel (refer 6.2.2).
2) Remove the brown, blue and black wires that go to the motor from the motor terminal block.

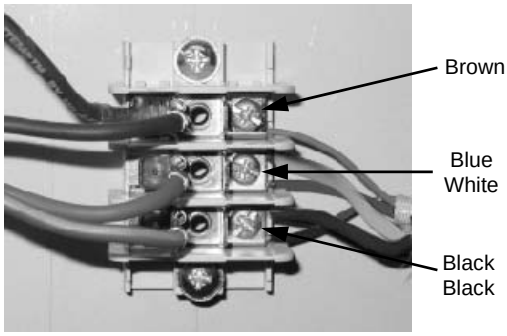

Figure 6.3.13

3) Undo the four screws holding the motor and bracket in place and remove the motor.

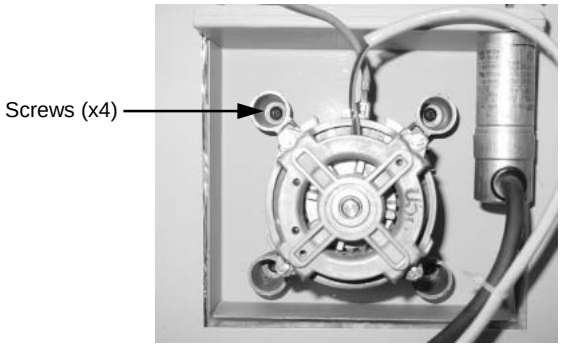

Figure 6.3.14

4) Replace and re-assemble in reverse order.
5) Ensure wire connections are correct (fig 6.3.13)

6.3.12 MOTOR DIRECTION TIMER

1) Open control panel (refer 6.2.1).
2) Remove wires from the timer, noting their positions, and the wire to the timer motor from the control panel.
3) Remove the four screws securing the timer to the timer mounting bracket.

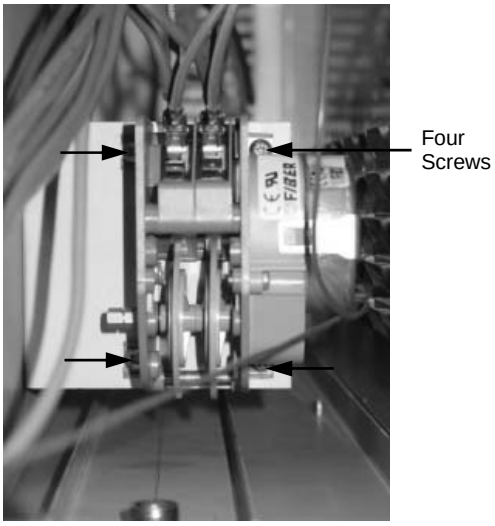

Figure 6.3.15

4) Replace the timer and reassemble in reverse order.

6.3.13 MOTOR CAPACITOR

1) Remove service panel (refer 6.2.2).
2) Undo the nut securing capacitor to oven.

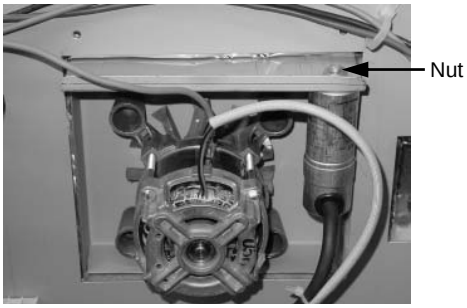

Figure 6.3.16

3) Remove the capacitor wires from the motor terminal block.
4) Replace with new capacitor, and re-assemble in reverse order.

6.3.14 OUTER GLASS (E27)

1) Open the oven door.
2) Lock hinges into position by rotating the hinge locking clip over the hinge locking notch.

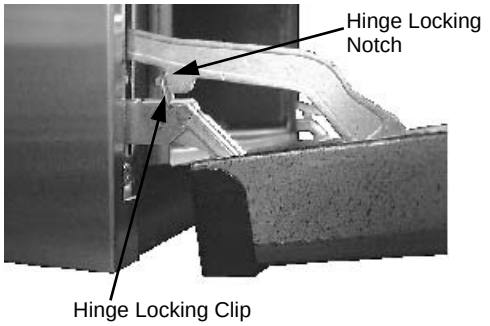

Figure 6.3.17

3) Lift door away from the oven and place on a flat surface.
4) Undo three screws and remove the trim from the bottom of the door. Carefully withdraw the glass.

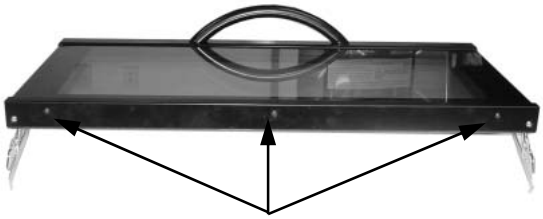

Figure 6.3.18

5) To replace, ensure that the two silicone rubber seals are in place on the left hand and right hand side of the door frame. Clean the inside of the glass and refit it, ensuring that the silicone rubber seals cover the outer edges of the glass. Refit the bottom trim, and fit the door to the oven.

6.3.15 INNER GLASS (E27)

1) Remove the outer glass (refer 6.3.14).
2) Undo four screws and remove the top trim and handle assembly.

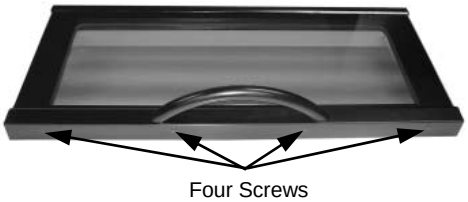

Figure 6.3.19

3) Uncrimp the retaining lugs of the window spacer and remove the spacer and glass.

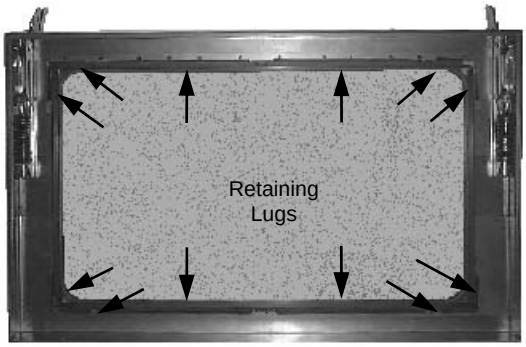

Figure 6.3.20

4) To replace, ensure the silicone rubber seal has not been displaced. Clean the glass and refit it. Place the window spacer in position and crimp the retaining lugs over to hold the glass in place. Refit outer glass as above.

6.3.16 DOOR SEALS

1) Open oven door.
2) To remove, hold at their centre point and pull forward until they unclip
3) Refit new seals.

Note: Fit top and bottom seals first, with open side of seal facing downwards. Fit side seals with open side facing outwards.

6.3.17 DOOR HANDLE (E27)

1) Remove the door (refer 6.3.14).
2) Undo four screws and remove the top trim and handle assembly, taking care not to dislodge the outer glass.
3) Undo two bolts securing handle to top trim. Replace handle and reassemble in reverse order.

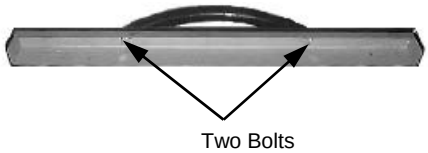

Figure 6.3.21

6.3.18 DOOR HINGES

1) Remove outer glass (refer 6.3.14).
2) Undo two screws securing hinge assembly to oven door.

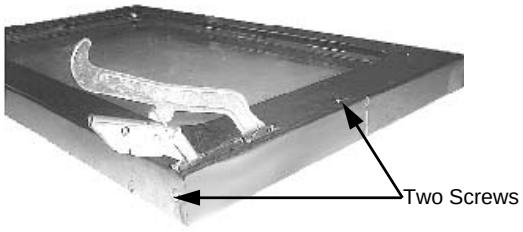

Figure 6.3.22

3) Withdraw hinge assembly and replace. Reassemble in reverse order.

6.3.19 HINGE COUNTER BRACKETS

1) Remove door (refer 6.3.14).
2) Remove screws from back of oven securing wrapper to oven.

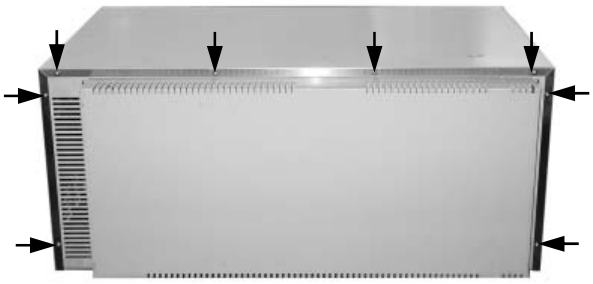

Figure 6.3.23

3) Turn oven onto its back and remove three screws at each side securing wrapper, and two securing insulation panel.

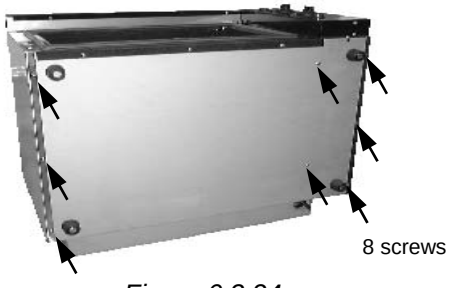

Figure 6.3.24

4) Undo three screws and remove lintel cover.
5) Remove control panel (refer 6.2.1) and microswitch bracket (refer 6.3.2). Place inside oven.
6) Remove three screws securing lintel support to oven and remove.

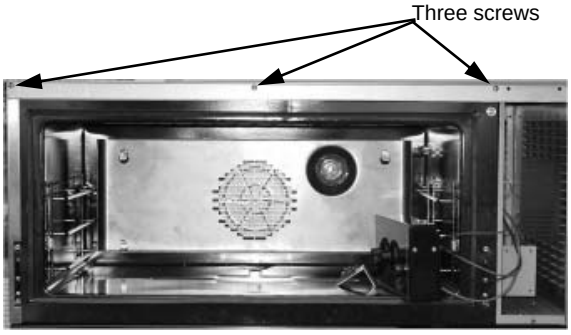

Figure 6.3.25

7) Remove wrapper.
8) Undo two screws securing left hand counter bracket to oven and remove. Replace, ensuring that bracket is installed with roller to top.

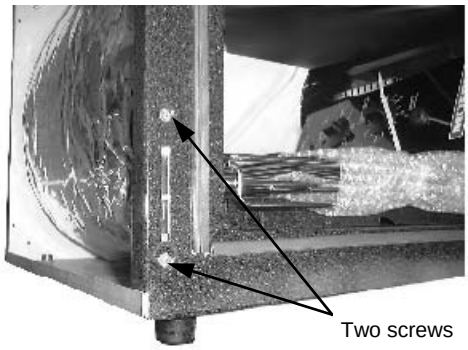

Figure 6.3.26

9) Remove two screws securing insulation panel to oven liner.

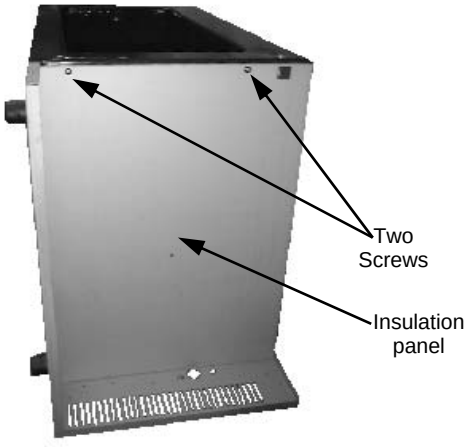

Figure 6.3.27

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10) Prise open the insulation panel to allow access to the right hand counter bracket. Undo two screws securing bracket, and remove bracket.

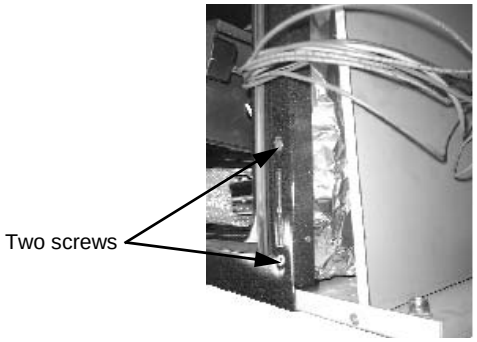

Figure 6.3.28

11) Replace, ensuring roller to top of bracket. Re-assemble in reverse order.

6.4 ADJUSTMENT / CALIBRATION

6.4.1 THERMOSTAT CALIBRATION

IMPORTANT: IF THE OVEN TEMPERATURE NEEDS TO BE INCREASED, ENSURE THAT THE THERMOSTAT IS IN THE 'OFF' POSITION BEFORE CARRYING OUT ADJUSTMENT.
IF OVEN TEMPERATURE NEEDS TO BE DECREASED, ENSURE THERMOSTAT IS IN THE 'MAX' TEMPERATURE POSITION BEFORE CARRYING OUT ADJUSTMENT.

1) Turn off power.
2) Remove thermostat knob by pulling it firmly away from control panel.
3) Adjust the calibration screw located in the centre of the thermostat shaft.

   To increase oven temperature, turn calibration screw anticlockwise.
   To decrease oven temperature, turn calibration screw clockwise.
   Adjustment of the calibration screw by 1° angular will alter oven temperature by approximately 0.8°C (1.5°F).

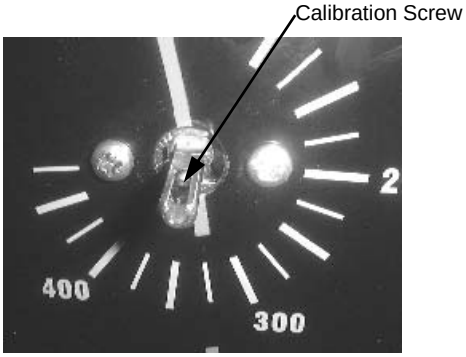

Figure 6.4.1

6.4.2 DOOR MICROSWITCH ADJUSTMENT

1) Open oven door.
2) Open control panel (refer 6.2.1).
3) With fingers, bend actuator arm of microswitch so that switch operates when door is in closed position.

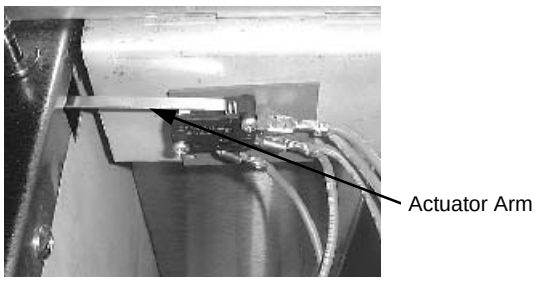

Figure 6.4.2

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6.4.3 60 MINUTE TIMER ZERO POSITION ADJUSTMENT

1) Remove 60 minute timer knob by pulling it firmly away from control panel.
2) Open control panel (refer 6.2.1). Loosen two screws on control panel holding 60 minute timer.

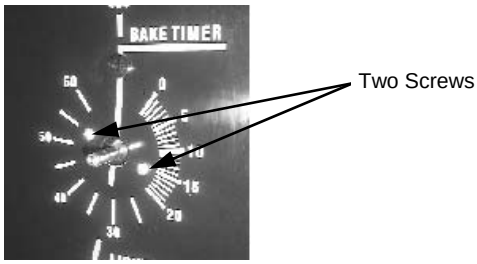


Figure 6.4.3

3) The timer can now be rotated a small amount as required to ensure that the buzzer sounds at the zero position.

6.4.4 BUZZER VOLUME ADJUSTMENT

NOTE: The buzzer volume is set to full at the factory. Should the volume need to be reduced then the following steps should be followed.

1) Remove control panel (refer 6.2.1).
2) Remove two screws holding buzzer to control panel.

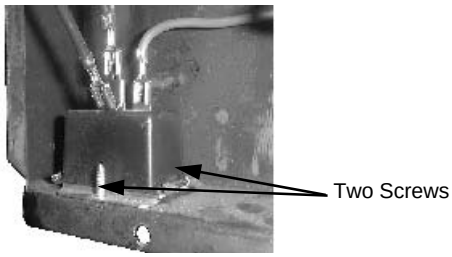


Figure 6.4.4

3) Adjust volume screw on buzzer, clockwise to increase volume, and anti-clockwise to decrease volume.

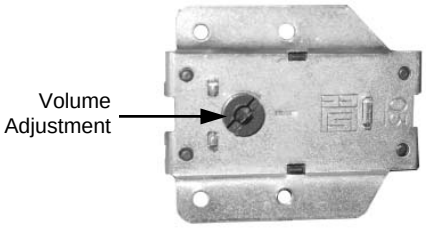
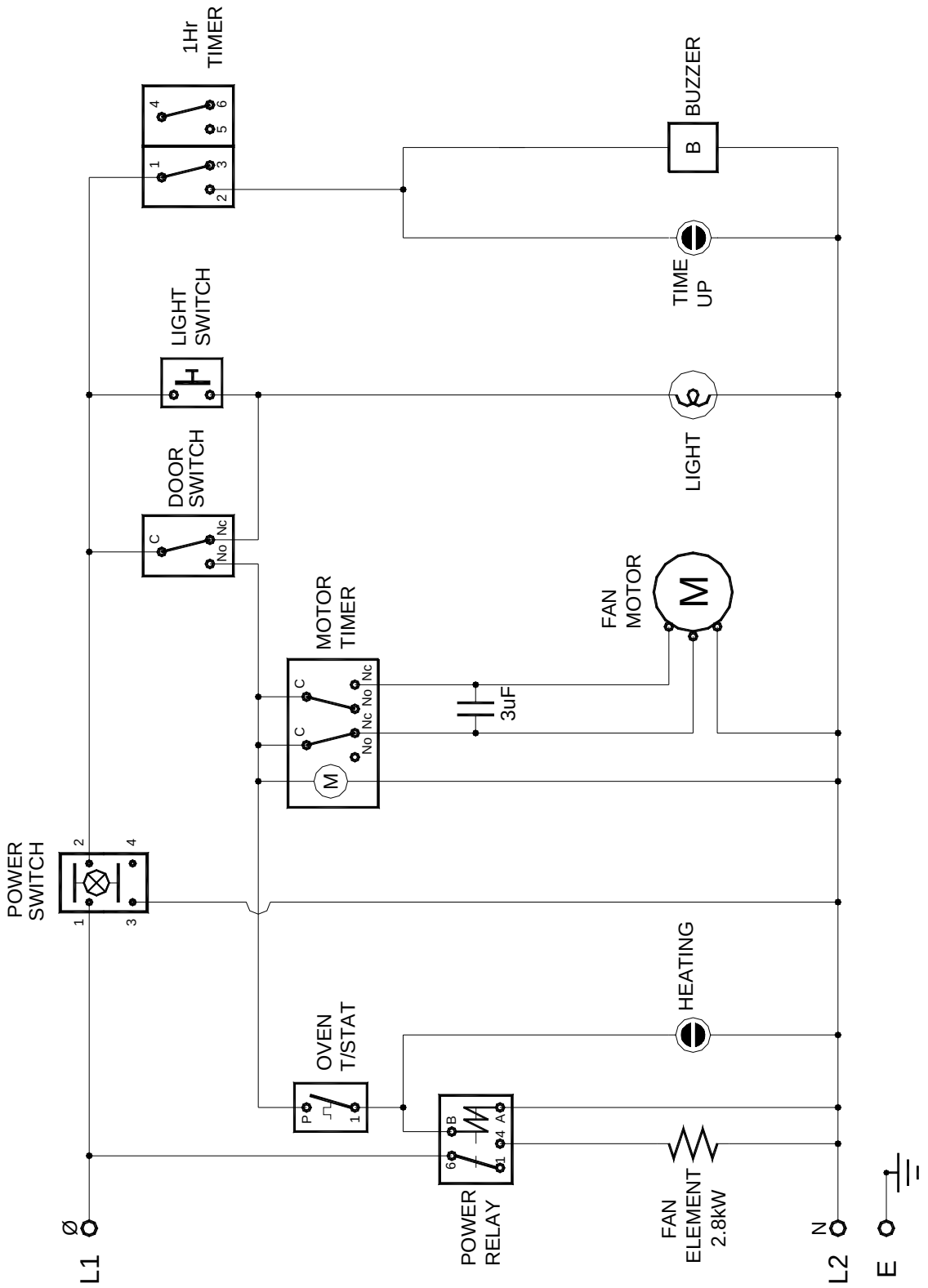


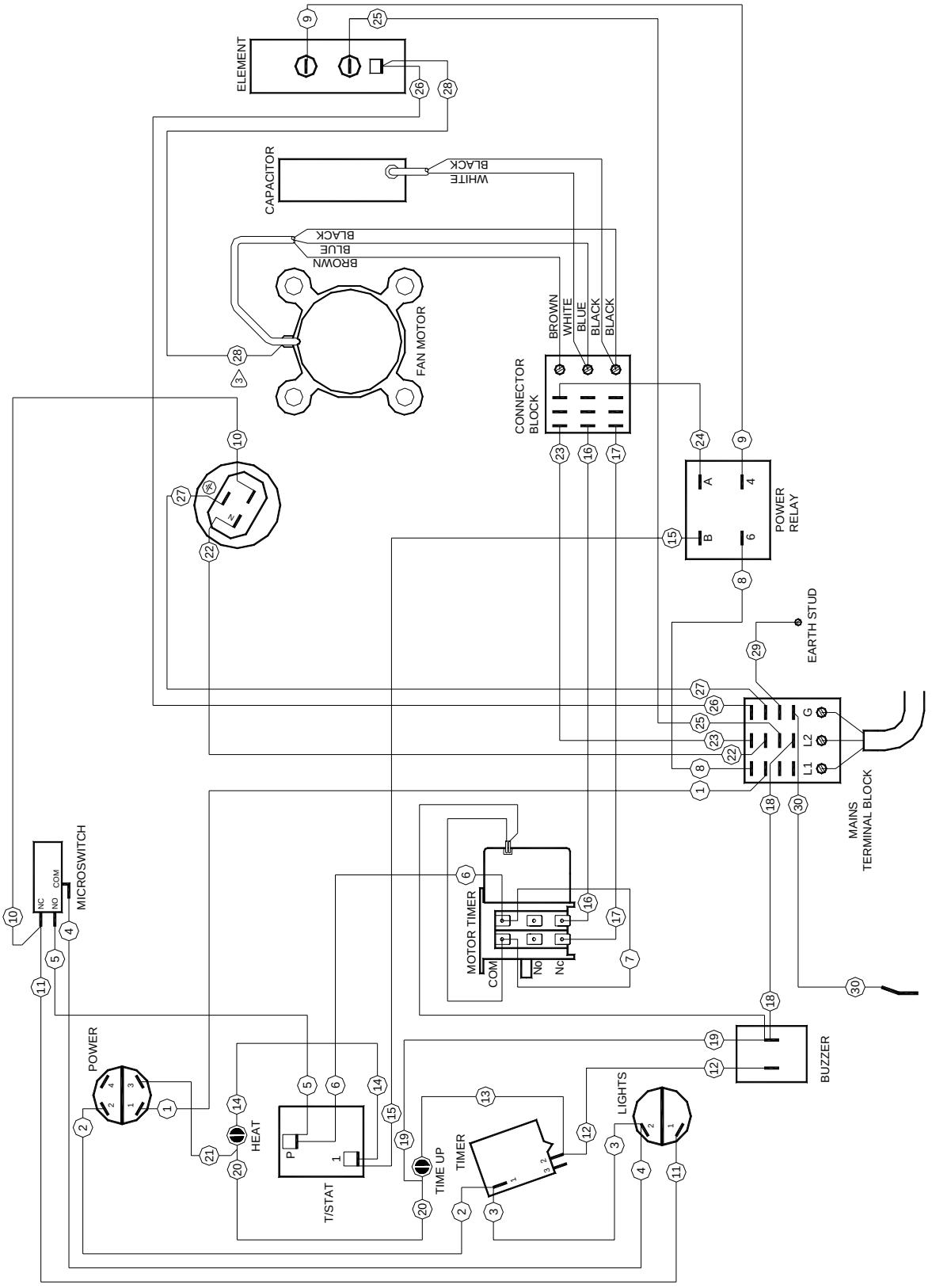
Figure 6.4.5

4) Reassemble in reverse order.

7. ELECTRICAL CIRCUIT SCHEMATIC



8. ELECTRICAL WIRING DIAGRAM



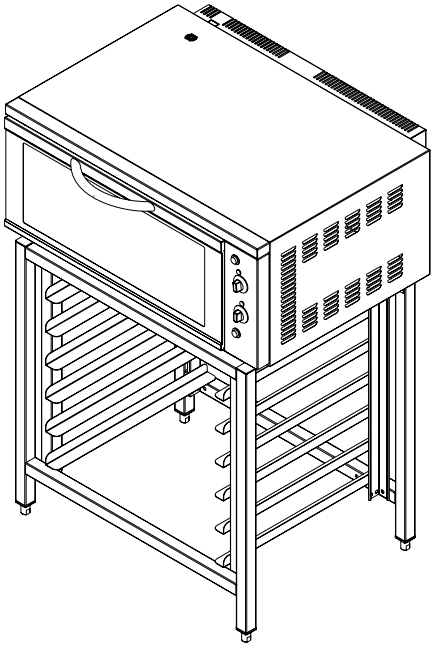
9. SPARE PARTS

PART NO	DESCRIPTION
CONTROLS	
021473	SWITCH - POWER
023211	THERMOSTAT
021472	KNOB - THERMOSTAT
020823	KNOB - BAKE TIMER
020849	NEON INDICATOR
011760	BAKE TIMER
011794	BUZZER
021474	LIGHT SWITCH
024505	RELAY
003004	MICROSWITCH
003002	OVEN LAMP GLASS
013520	OVEN LAMP ASSEMBLY
013521	OVEN LAMP - 240V 40W MINIATURE EDISON SCREW
MOTOR & ELEMENTS	
024410	OVEN FAN ELEMENT (2800W) - 230-240V
024409	OVEN FAN ELEMENT (2800W) - 208-220V
024431	FAN MOTOR
024432	CAPACITOR 3µF
024503	MOTOR TIMER 208-220V
024567	MOTOR TIMER 220-240V
024433	FAN
021698	BAFFLE SECURING SCREW
DOOR	
SA1548	COMPLETE DOOR ASSEMBLY (E27)
SA1768	COMPLETE DOOR ASSEMBLY (E27MS)
024405	OVEN DOOR SEAL ASSEMBLY SIDE
024404	OVEN DOOR SEAL ASSEMBLY TOP/BOTTOM
021468	HANDLE (E27)
026498	HANDLE (E27MS)
024377	DOOR OUTER GLASS (E27)
024378	DOOR INNER GLASS (E27)
024378	DOOR INNER AND OUTER GLASS (E27MS)
023218	DOOR HINGE
RACKS	
024406	OVEN SIDE RACK LH
024407	OVEN SIDE RACK RH
023068	SIDE RACK SCREW
024408	WIRE OVEN RACK (NORTH AMERICAN MODELS)
025349	WIRE OVEN RACK (ALL OTHER MODELS)

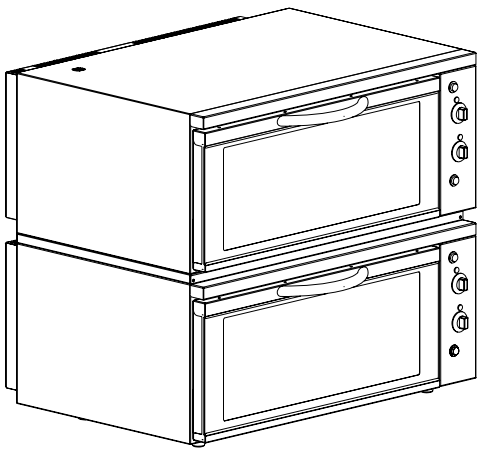
10. ACCESSORIES

OVEN RACKS (PART NO 24408)

A28 STAINLESS STEEL STAND



DOUBLE STACKING KIT (PART NO 24419)

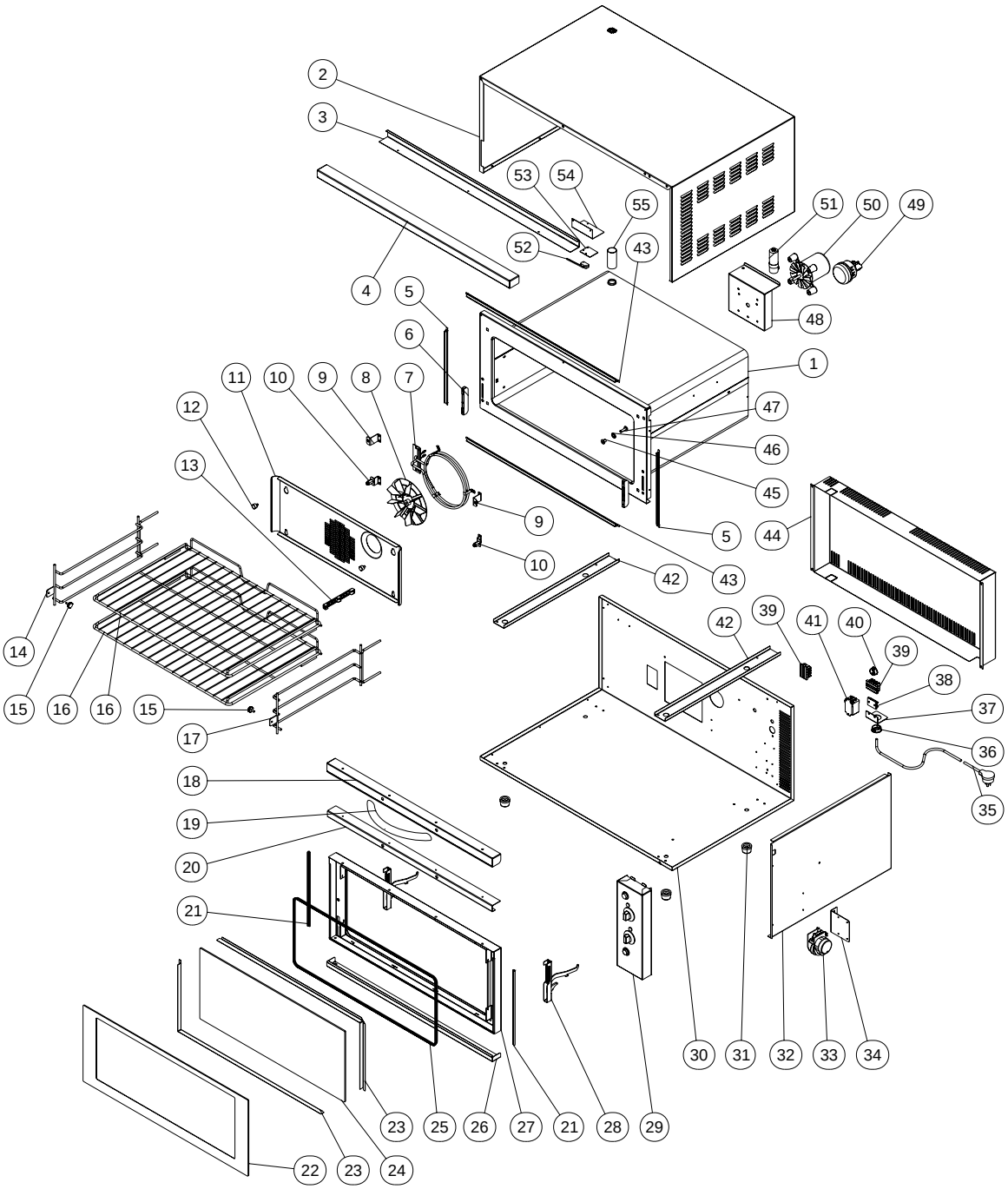


100 MM (FOUR INCH) FOOT OPTION (PART NO 13048)

25 MM (ONE INCH) FOOT OPTION (PART NO 13908)

11. PARTS DIAGRAMS

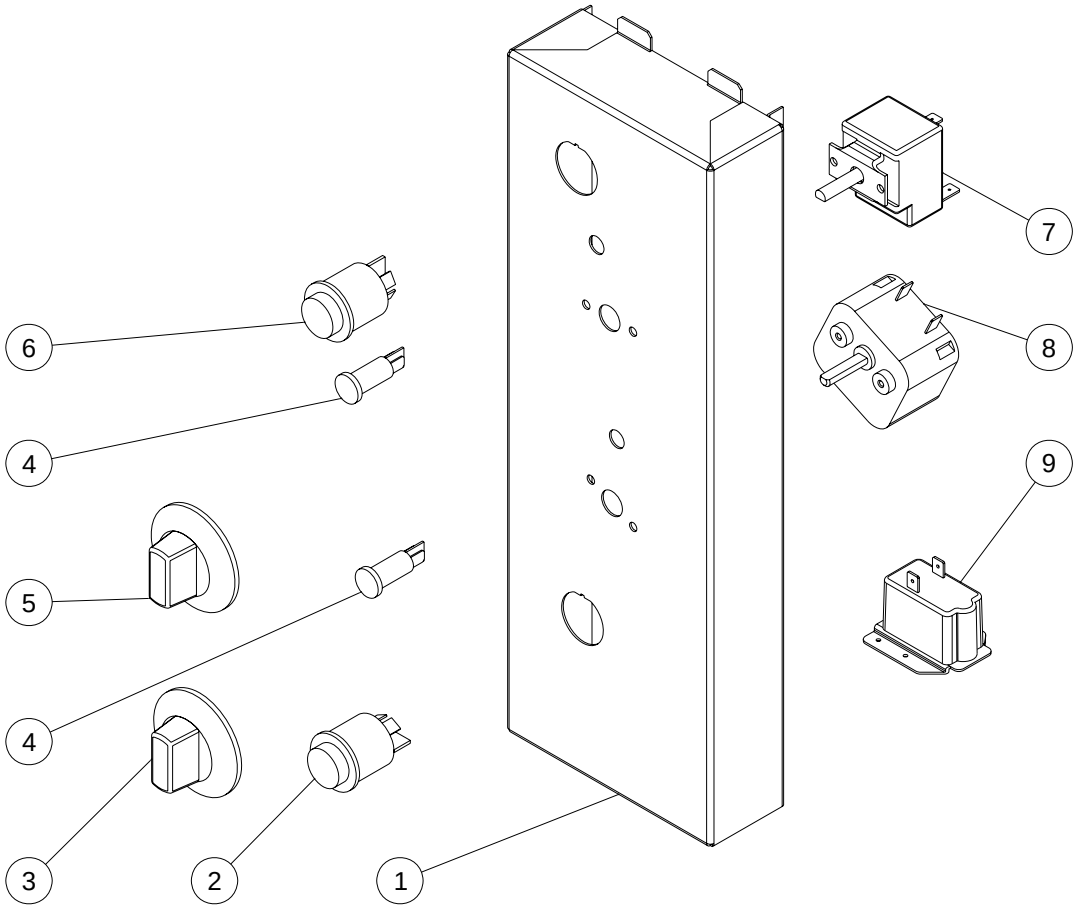
11.1 MAIN ASSEMBLY



Pos	Part No.	Description
1	004914	OVEN – ENAMELLED
2	024393	WRAPPER
3	024381	LINTEL SUPPORT
4	004913	LINTEL – ENAMELLED
5	024405	SIDE SEAL ASSEMBLY
6	023219	HINGE COUNTER BRACKET
7	024410	OVEN ELEMENT 2800W – 240V
	024409	OVEN ELEMENT 2800W – 208V
8	024433	OVEN FAN
9	024398	BAFFLE BRACKET TOP
10	024507	BAFFLE BRACKET BOTTOM
	014031	STANDOFF
11	024526	BAFFLE
12	021698	BAFFLE SCREW
13	017770	PHIAL GUARD
14	024406	LEFT HAND SIDE RACK
15	023068	SIDE RACK SCREW
16	024408	OVEN RACK (NORTH AMERICAN MODEL)
16	025349	OVEN RACK (ALL OTHER MODEL)
17	024407	RIGHT HAND SIDE RACK
18	024413	TOP TRIM (Refer Section 11.3 for E27MS Door Assembly)
19	021468	DOOR HANDLE (Refer Section 11.3 for E27MS Door Assembly)
20	024394	HANDLE STIFFENER (Refer Section 11.3 for E27MS Door Assembly)
21	024477	OUTER GLASS SEAL (Refer Section 11.3 for E27MS Door Assembly)
22	024377	DOOR OUTER GLASS (Refer Section 11.3 for E27MS Door Assembly)
23	004919	GLASS CLAMP ANGLE (Refer Section 11.3 for E27MS Door Assembly)
24	024378	DOOR INNER GLASS (Refer Section 11.3 for E27MS Door Assembly)
25	024392	INNER GLASS SEAL (Refer Section 11.3 for E27MS Door Assembly)
26	024414	BOTTOM TRIM (Refer Section 11.3 for E27MS Door Assembly)
27	004918	DOOR INNER PANEL (Refer Section 11.3 for E27MS Door Assembly)
28	023218	HINGE
29	SA1550	CONTROL PANEL ASSEMBLY BAKBAR **(REFER SECTION 11.2)**
	SA1549	CONTROL PANEL ASSEMBLY BLUE SEAL **(REFER SECTION 11.2)**
	SA1551	CONTROL PANEL ASSEMBLY MOFFAT **(REFER SECTION 11.2)**
30	024394	OVEN BODY
31	013908	FOOT ASSEMBLY
32	024396	INSULATION PANEL
33	024503	MOTOR TIMER 208-220V
	024567	MOTOR TIMER 220-240V
34	024504	MOTOR TIMER MOUNTING BRACKET
35	017185	CORDSET 15A – NZ/AUST
	010162	POWERFLEX CORD 15A – EXPORT
	017453	CORDSET 13A FUSED – UK
	012206	CORDSET 15A – USA/CANADA
36	019213	SNAP BUSH 32mm
37	018251	CABLE ENTRY BRACKET
38	002138	CABLE CLAMP
	002441	INSULATOR
39	013586	TERMINAL BLOCK
40	019238	SNAP BUSH 26mm
41	024505	RELAY 30A
42	024395	FOOT CHANNEL
43	024404	OVEN TOP/BOTTOM SEAL ASSEMBLY
44	024379	COVER PANEL
45	021637	MICROSWITCH BUTTON
	021638	PIN CIRCLIP
46	044210	SPIRE CLIP

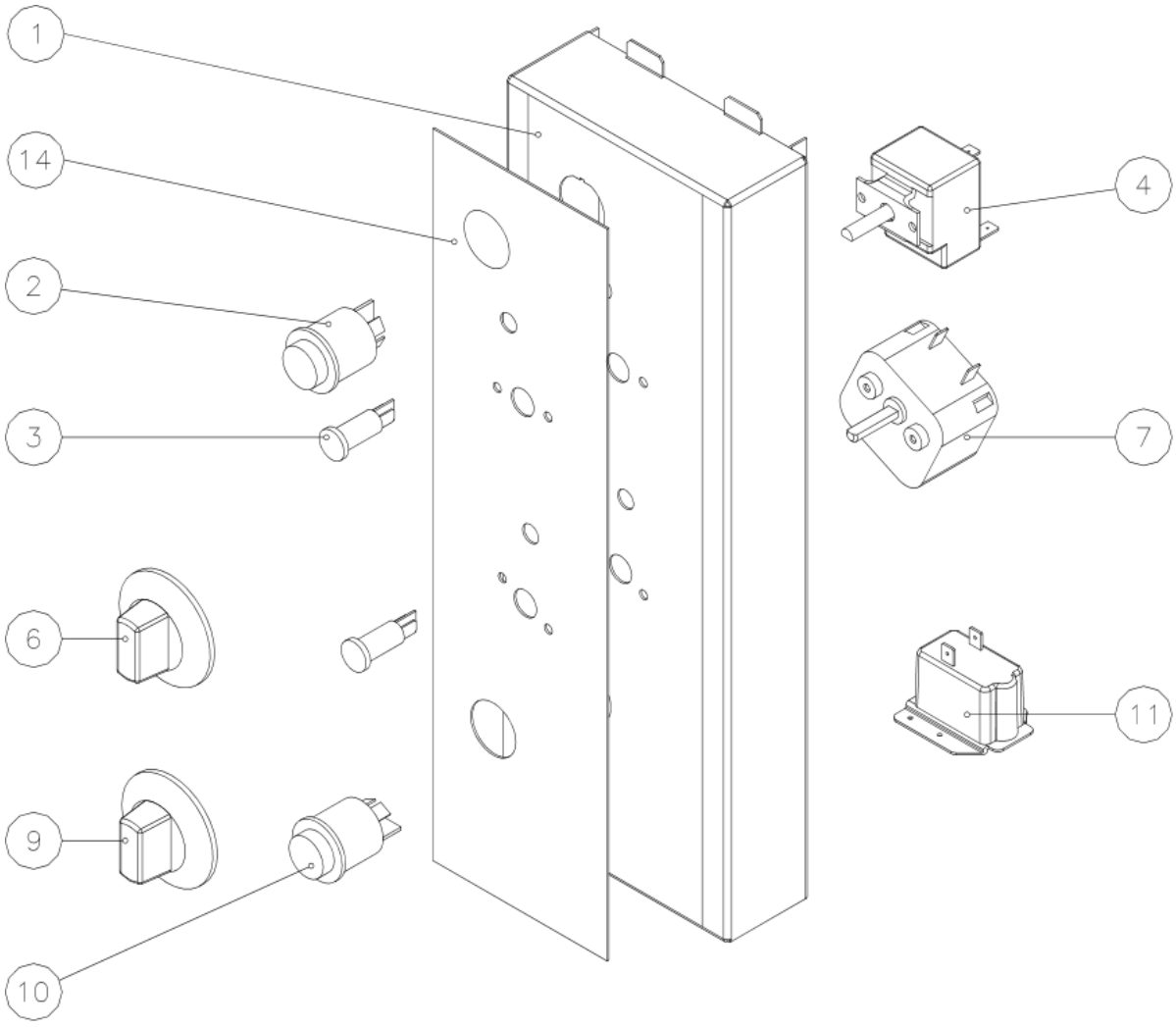
47	013610	DOOR BUSH
48	003016	MOTOR MOUNTING PLATE
49	013520	OVEN LAMP ASSEMBLY
	003434	SILK GASKET
	013521	LAMP 40W
	003002	LIGHT GLASS
50	024431	MOTOR
	024478	MOTOR SHAFT SEAL
51	024432	CAPACITOR 3µF
52	003004	MICROSWITCH
53	013977	INSULATOR
54	023093	MICROSWITCH MOUNTING BRACKET
55	024399	VENT TUBE

11.2.1 CONTROL PANEL ASSEMBLY - E27



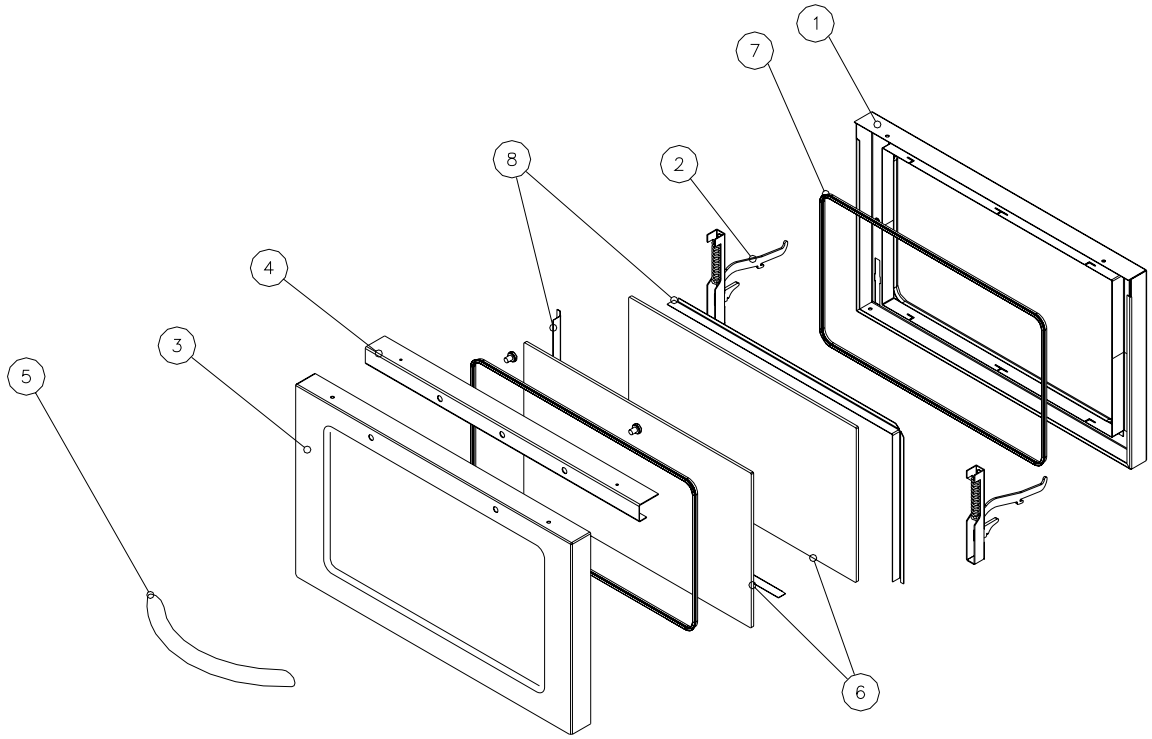
Pos	Part No.	Description
1	004916	CONTROL PANEL °C – BAKBAR
	004915	CONTROL PANEL °C – BLUE SEAL
	004917	CONTROL PANEL °F – MOFFAT
2	021474	LIGHT SWITCH
3	020823	TIMER KNOB
4	020849	INDICATOR NEON
5	021472	THERMOSTAT KNOB
6	021473	POWER SWITCH
7	023211	THERMOSTAT 50-250°C (120-480°F)
8	011760	TIMER – 60 MIN
9	011794	BUZZER

11.2.2 CONTROL PANEL ASSEMBLY - E27MS



Pos	Part No.	Description
1	026487	CONTROL PANEL
2	021473	POWER SWITCH
3	020849	INDICATOR NEON
4	023211	THERMOSTAT
6	021472	KNOB - THERMOSTAT
7	011760	1 HOUR TIMER
9	020823	KNOB - TIMER
10	021474	LIGHT SWITCH
11	011794	BUZZER
14	026613	OVERLAY - BLUE SEAL
	026496	OVERLAY - MOFFAT

11.3 E27MS DOOR ASSEMBLY



Pos	Part No.	Description
1	005038	DOOR INNER WA
2	023218	HINGE
3	026485	DOOR OUTER PANEL
4	026579	HANDLE STIFFENER
5	026498	DOOR HANDLE PLATED
6	024378	DOOR INNER GLASS
7	024392	INNER GLASS SEAL
8	026492	GLASS CLAMP ANGLE

11. SERVICE CONTACTS

AUSTRALIA

VICTORIA - MOFFAT PTY
HEAD OFFICE AND MAIN WAREHOUSE
740 Springvale Road
Mulgrave VIC 3170
Spare Parts Department
Tel (03) 9518 3888
Fax (03) 9518 3838
Free Call 1800 337 963
Fax (03) 9518 3895

NEW SOUTH WALES - MOFFAT PTY
Unit 3/142 James Ruse Drive
Rosehill NSW 2142
Spare Parts
Tel (02) 8833 4111
Free Call 1800 337 963
Fax (03) 9518 3895

QUEENSLAND - MOFFAT PTY
30 Prosperity Place
Geebung QLD 4034
Spare Parts
Tel (07) 3630 8600
Free Call 1800 337 963
Fax (03) 9518 3895

SOUTH AUSTRALIA - MOFFAT PTY
28 Greenhill Rd
Wayville SA 5034
Spare Parts
Tel (08) 8274 2116
Free Call 1800 337 963
Fax (03) 9518 3895

WESTERN AUSTRALIA - MOFFAT PTY
PO Box 689
Joondalup Business Centre WA 6027
Spare Parts
Tel (08) 9305 8855
Free Call 1800 337 963
Fax (03) 9518 3895

NATIONAL COVERAGE FOR 24 HOUR SERVICE OR MAINTENANCE DIAL FREE CALL 1800 622 216 (AUSTRALIA ONLY)

CANADA

SERVE CANADA
22 Ashwarren Rd
Downview
Ontario M3J1Z5
Tel 416-631-0601
Fax 416-631-0315

NEW ZEALAND

CHRISTCHURCH - MOFFAT LTD
16 Osborne St
PO Box 10-001
Christchurch
Spare Parts
Tel (03) 389 1007
Fax (03) 389 1276
Free Call 0800 MOFFAT (0800 6633 28)
Fax (03) 381 3616

AUCKLAND - MOFFAT LTD
4 Waipuna Road
Mt Wellington
Auckland
Spare Parts
Tel (09) 574 3150
Fax (09) 574 3159
Free Call 0800 MOFFAT (0800 66 33 28)

UNITED KINGDOM

BLUESEAL LTD
Units 6-7 Mount St Business Park
Mount St
Birmingham B7 5QU
England

Tel 0121-327 5575
Fax 0121-327 9711

UNITED STATES OF AMERICA

MOFFAT INC.
3765 Champion Blvd
Winston-Salem
NC27115

Tel 1-800-551 8795
Fax 336 661 9546

NATIONAL COVERAGE FOR SERVICE OR MAINTENANCE DIAL FREE CALL 1800 551 8795 (USA ONLY)

APPENDIX A. DOUBLE STACKING KIT (24419)

Kit Includes:			**Part No**
1	x	Vent Duct	24306
1	x	Vent Pipe	24307
1	x	Saddle Clamp	10023
1	x	Double Stack Front	04921
2	x	Double Stack Side	24509
1	x	Double Stack Rear	24510
25	x	$^3/_8$" x 8A Pozi Pan Hd Screw	41045
2	x	½" x 8 Phillips Head Black Screw	41046
2	x	Black Fibre Washer	45605

Assembly Instructions: (THE ELECTRICAL SUPPLY MUST BE DISCONNECTED)

A. <u>Bottom Unit</u> (Refer figure 1)

1. Position vent duct on bottom unit over oven vent. Temporarily locate double stack rear in correct position on top of bottom unit. Centrally locate the vent duct in the cut-out. Check that the oven vent is covered and mark the five hole positions (two down each side of the flue duct and one at front) on the oven wrapper.

2. Drill five ø3.5mm holes in the oven wrapper where marked.

3. Secure the vent duct to the wrapper with five 3/8" x 8A Pozi screws into these holes.

4. Undo the three screws securing the top lintel to the bottom oven, and remove the lintel. Remove the four screws from the top rear of the oven wrapper.

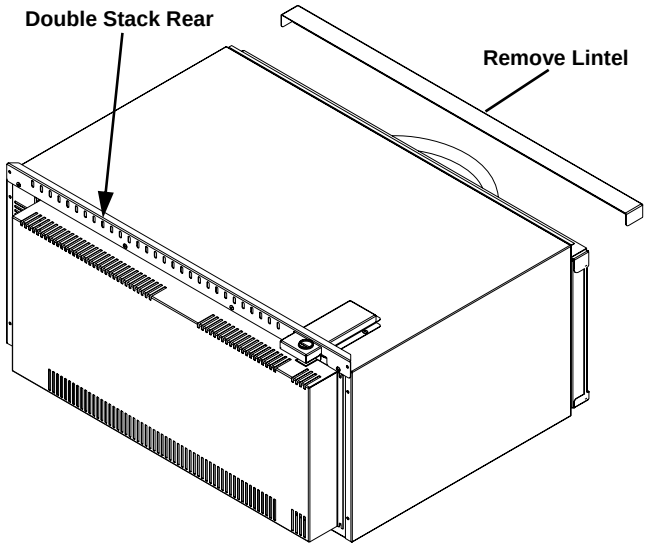


Figure A.1

B. <u>Top Unit</u>

1. Remove all trays and racks from oven.
   Tip oven upside down and remove the feet screwed into the base.

2. Remove the six screws (three each side) securing the oven wrapper to the sides of the oven. Position the double stack sides flush with the sides and front of the oven, and secure each with three screws.

3. Remove the three screws along the front bottom edge of the oven. Position the double stack front over these three screw holes. Flush the ends of the double stack front with the sides of the unit and secure to the double stack sides using the two black screws (with fibre washers). Secure to bottom of oven with three screws.

4. Secure the double stack rear to the double stack sides with two screws.

C. <u>Stacking the Ovens</u> (Refer figure A.2)

1. With two persons, lift the top oven onto the bottom oven and position slightly forward so that the double stack front engages with the lintel support on the bottom oven, then slide the top oven back until the double stack rear locates over the bottom oven.

2. Secure double stack rear to bottom unit with four screws. Secure the double stack front to the lintel support of the bottom unit with three screws.

3. Remove the rear cover panel from the top unit. Fit the vent pipe to the vent duct then secure pipe to the rear panel of the top unit using the saddle clamp and two screws.

4. Using pliers or similar, knock out the notches at the top and bottom of the rear cover panel that allow for the vent pipe. Refit the rear cover panel to the top unit.

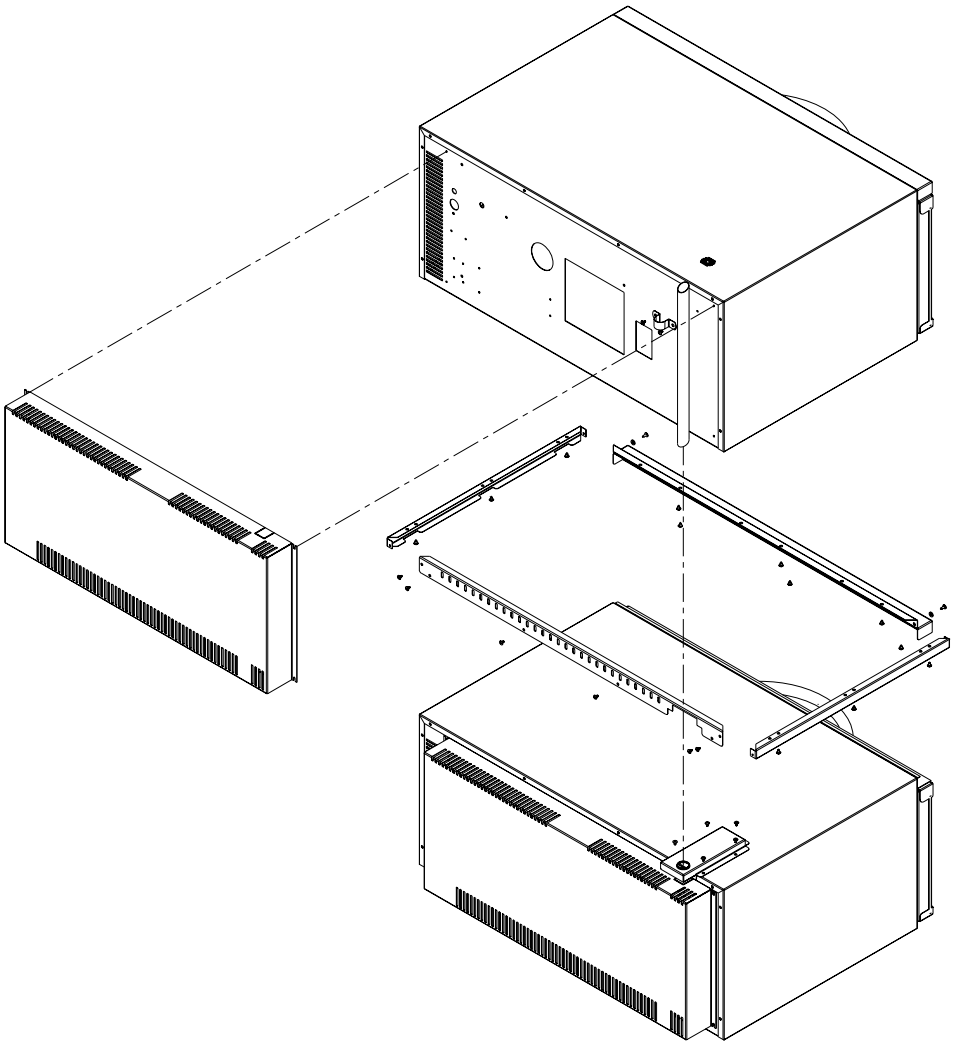


Figure A.2